

09538036

SEQ ID NO: 6

SUMMARIES

Result No.	Score	% Match	Query Length	DB	ID	Description
1	2208	100.0	420	20	AAW81358	Human 7-transmembr
2	2208	100.0	420	21	AAY99930	HLWAR77 polypeptid
3	2208	100.0	420	21	AAY79375	Human neuropeptide
4	2204	99.8	420	21	AAB07426	Amino acid sequenc
5	2115	95.8	408	21	AAY76882	Human NPY-Y7 recep
6	1730.5	78.4	417	21	AAY79377	Rat neuropeptide F
7	1719	77.9	336	20	AAW67774	Partial human 7-tr
8	1719	77.9	336	21	AAY99931	HLWAR77 polypeptid
9	1666	75.5	405	21	AAY76883	Mouse NPY-Y7 recep
10	1061	48.1	428	21	AAY56887	Human B5 receptor
11	1060	48.0	430	21	AAY93151	Novel human G-prot
12	1060	48.0	430	21	AAY79376	Human neuropeptide
13	1024	46.4	432	21	AAY93146	Novel rat G-protei
14	1024	46.4	432	21	AAY79373	Rat neuropeptide F
15	984	44.6	432	21	AAY56886	Rat B5 receptor po
16	525.5	23.8	444	20	AAY03649	Human 7-transmembr
17	525.5	23.8	444	22	AAB61969	Human HCRT2 polyp
18	522.5	23.7	444	22	AAB61968	Canine wild-type H
19	519.5	23.5	460	22	AAB61970	Rat HCRT2 polypep
20	502	22.7	431	21	AAY94993	Human secreted pro
21	502	22.7	431	22	AAB74773	Human G protein-co
22	502	22.7	431	22	AAB48963	Human G protein-co
23	501.5	22.7	402	17	AAW06124	Neuropeptide recep
24	500	22.6	431	21	AAY71309	Human orphan G pro
25	500	22.6	431	21	AAB02843	Human G protein co
26	499.5	22.6	425	19	AAW80456	G-protein coupled
27	499.5	22.6	425	22	AAB67489	Amino acid sequenc
28	499.5	22.6	425	22	AAB67079	Human HFGAN72 rece
29	495.5	22.4	423	19	AAW81460	Human G-protein co
30	494	22.4	431	21	AAB02853	Human G protein co
31	492.5	22.3	423	18	AAW34512	G protein coupled
32	491.5	22.3	423	18	AAW32797	Human derived long
33	476.5	21.6	369	17	AAW06125	Neuropeptide recep
34	476.5	21.6	377	17	AAW06126	Neuropeptide recep
35	476.5	21.6	389	19	AAW80805	Amino acid sequenc
36	465	21.1	381	21	AAY56888	Human Y2 receptor
37	462.5	20.9	381	16	AAR78273	Rat hippocampal ne
38	460.5	20.9	381	16	AAR78272	Rat hippocampal ne
39	460	20.8	381	16	AAR78271	Human hippocampal
40	460	20.8	381	19	AAW41710	Rhesus monkey neur
41	446	20.2	428	18	AAW29104	Enhanced CCK-A/gas
42	445.5	20.2	444	14	AAR38890	Sequence encoded b
43	445.5	20.2	444	18	AAW21567	LETO rat cholecyst
44	445.5	20.2	444	22	AAB66618	Rat pancreatic CCK
45	444.5	20.1	383	21	AAB14324	Rhesus Y1 receptor

ALIGNMENTS

RESULT 1

AAW81358

ID AAW81358 standard; Protein; 420 AA.

XX

AC AAW81358;

XX

DT 30-MAR-1999 (first entry)

XX

DE Human 7-transmembrane receptor HLWAR77.

XX

KW Human; transmembrane receptor; antagonist; infection; bacterium; fungus;

KW protozoan; virus; HIV; pain; cancer; anorexia; bulimia; asthma; ulcer;

KW Parkinson's disease; heart failure; hypotension; hypertension; asthma;
KW urinary retension; osteoporosis; angina pectoris; myocardial infarction;
KW allergy; benign prostatic hypertrophy; neurological disorder.
XX
OS Homo sapiens.
XX
PN EP884387-A2.
XX
PD 16-DEC-1998.
XX
PF 09-JUN-1998; 98EP-0304580.
XX
PR 13-JAN-1998; 98US-0006140.
PR 11-JUN-1997; 97US-0049332.
PR 02-DEC-1997; 97US-0067253.
XX
PA (SMIK) SMITHKLINE BEECHAM CORP.
XX
PI Elshourbagy N, Sathe G;
XX
DR WPI; 1999-026581/03.
DR N-PSDB; AAV68484.
XX
PT New DNA encoding 7-trans-membrane receptor polypeptide HLWAR77 -
PT used to treat, diagnose and prevent infections, pain, cancers,
PT anorexia, asthma, Parkinson's disease, acute heart failure,
PT osteoporosis, ulcers, allergies and psychotic disorders
XX
PS Claim 11; Page 8-9; 27pp; English.
XX
CC This sequence represents the human 7-transmembrane receptor HLWAR77.
CC The protein can be used to isolate agonists and antagonists. These can
CC be used as active agents in the treatment of infections (e.g. bacterial,
CC fungal, protozoal and viral infections, particularly HIV-1 or HIV-2),
CC pain, cancers, anorexia, bulimia, asthma, Parkinson's disease, acute
CC heart failure, hypotension, hypertension, urinary retension,
CC osteoporosis, angina pectoris, myocardial infarction, ulcers, asthma,
CC allergies, benign prostatic hypertrophy and psychotic and neurological
CC disorders.
XX
SQ Sequence 420 AA;

Query Match 100.0%; Score 2208; DB 20; Length 420;
Best Local Similarity 100.0%; Pred. No. 1.5e-223;
Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	MNEKWDTNSSSENWHPIWNVNDTKHHLYSDINITYVNYLHQPVAAIFIISYFLIFFLCM	60
Db	1	mnekwdtnssenwhpiwnvndtkhhlysdinityvnylhqpqvaafiisyliffllcm	60
Qy	61	MGNTVVCFIVMRNKHMTVTNLFILNLAISDLLVGIFCMPITLLDNIAGWPFGNTMCKI	120
Db	61	mgntvvcfivmrnkhmhtvtnlfilnlaisdllvgifcmpitlldniagwpfgntmcki	120
Qy	121	SGLVQGISVAASVFTLVIAIVDRFQCVVYPFKPKLTIKTAFVIIMIIVWLAITIMSPSAV	180
Db	121	sglvqgisvaasvftlvaiavdrfqcvvypfkpkltiktafviimiiwvlaitimspsav	180
Qy	181	MLHVQEEKYRVRNLNSQNKTSPPVYWCREDWPNQEMRKIYTTVLFANIYLAPLSLIVIMYG	240
Db	181	mlhvqeekyyrvrlnsqnktsppvwc redw p n q e m r k i y t t v l f a n i y l a p l s l i v i m y g	240
Qy	241	RIGISLFRAAVPHTGRKNQEQWHVVSRRKKQKIIKMLLIVALLFILSWLPLWTLMLSDYA	300
Db	241	rigislfraavphtgrknqeqwhvvsrrkkqkiikml livallfilswlplwtlmlsdy a	300
Qy	301	DLSPNELQIINIYIPFAHWLAFGNSSVNPPIIYGFFNENFRRGFQEAFLQLCQKRAKPM	360
Db	301	dls p n e l q i i n i y i p f a h w l a f g n s s v n p p i i y g f f n e n f r r g f q e a f l q l c q k r a k p m	360

Qy 361 EAYALKAKSHVLINTSNQLVQESTFQNPHGGETLLYRKS AEKPQQELVMEELKETTNSSEI 420
|||||
Db 361 eayalkakshvlintsnqlvqestfqnpghgetllyrksaekppqqlvmeelkettnssei 420

RESULT 2

AA99930

ID AAY99930 standard; Protein; 420 AA.

XX

AC AAY99930;

XX

DT 16-OCT-2000 (first entry)

XX

DE HLWAR77 polypeptide #1.

XX

KW G-protein coupled receptor family; HLWAR77; bacterial; fungal; viral;

KW infection; HIV; cancer; diabetes; asthma; Parkinson's disease;

KW heart failure; 7TM receptor; human.

XX

OS Homo sapiens.

XX

PN WO200031107-A1.

XX

PD 02-JUN-2000.

XX

PF 17-NOV-1999; 99WO-US27282.

XX

PR 19-NOV-1998; 98US-0195517.

XX

PA (SMIK) SMITHKLINE BEECHAM CORP.

PA (SMIK) SMITHKLINE BEECHAM PLC.

XX

PI Sathe GM, Elshourbagy NA, Ames RS, Sarau HM, Foley JJ;

PI Chambers JK;

XX

DR WPI; 2000-400024/34.

DR N-PSDB; AAA61230.

XX

PT HLWAR77 nucleic acids and polypeptides useful for treating a range of

PT diseases, e.g. Parkinson's disease, asthma, cancers and osteoporosis -

XX

PS Claim 1; Page 14; 47pp; English.

XX

CC The present sequence is a G-protein coupled receptor (or 7TM) protein

CC referred to as HLWAR77. The DNA encoding this sequence was cloned using

CC 2 oligonucleotides (AAA61232 and AAA61233). These oligonucleotides were

CC designed using an EST homologous to the 7TM superfamily. A ligand

CC binding assay was used to screen HLWAR77 for ligands. The peptides

CC A-18-F-NH2 and F-8-F-NH2 (AAY99932 and AAY99933) were found to be

CC ligands for the receptor. The HLWAR77 polypeptides and nucleic acids may

CC be used for the treatment of a wide range of diseases including

CC bacterial, fungal and viral infections, HIV, cancer, diabetes, asthma,

CC Parkinson's disease, heart failure and other disorders associated with

CC G-protein coupled receptors. They may also be used to identify agonists

CC and antagonists of HLWAR77 which may be used to correct imbalances in

CC the expression or activity of the polypeptide.

XX

SQ Sequence 420 AA;

Query Match 100.0%; Score 2208; DB 21; Length 420;
Best Local Similarity 100.0%; Pred. No. 1.5e-223;
Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MNEKWDTNSSSENWHPIWNVNDTKHHLYSDINITYVNYLHQPQVAAIFIISYFLIFFLCM 60

|||||
Db 1 mnekwdtnsssenwhpiwnvndtkhhlysdinityvnylhqpqvaaifiisyfliffclm 60

Qy 61 MGNTVVCFIVMRNKHMTVTNLFILNLAISDLLVGIFCMPITLLDNIAGWPF GNTMCKI 120

|||||
Db 61 mgntvvcfivmrnkhmtvtnlfilnlaisdllvgifcmpitlldniagwpgfntmcki 120

Qy	121	SGLVQGISVAASVFTLVAVDRFQC	VVYPFKPKLTIKTAFVIIMIIVL	AITIMSPSAV	180
Db	121	sglvqgisvaasvftlvaiavdrfq	cvvypfkpkltiktafviimiiwv	laitimspsav	180
Qy	181	MLHVQEEKYYRVRLNSQNKTS	SPVYWCREDWPNQEMRKIYTTV	LFANIYLA	PLSLIVIMYG 240
Db	181	mlhvqeekyyrvrlnsqnkts	spvywcredwpngemrkiyttvl	faniylap	slslivimyg 240
Qy	241	RIGISLFRAAVPHTGRKNQE	QWHVVSRRKKQKIIMLLI	VALFIL	SWLPLWTLMLSDYA 300
Db	241	rigislfraavphtgrknqeq	whvvsrkkqkiikmllival	lallfil	swlplwtlmlsda 300
Qy	301	DLSPNELQIINIYIPFAHWL	AFGNSSVNPPIIYGFFNEN	FRRGFQ	EAFQLQLCQKRAKPM 360
Db	301	dlspnelqiiniyiyfahwla	fgnssvnpiiygffnenfr	rgfqeaf	qlqlcqkrakpm 360
Qy	361	EAYALKAKSHVLINTSNQLV	QESTFQNP	PHGETLLYRKSAEKPQ	QELVMEELKETTSSEI 420
Db	361	eayalkakshvlintsnqlv	gestfqnp	hgetllyrksaekpq	qelvmeelkettnssei 420

RESULT 3

AAAY79375

ID AAY79375 standard; Protein; 420 AA.

XX

AC AAY79375;

XX

DT 01-AUG-2000 (first entry)

XX

DE Human neuropeptide FF (NPFF2) receptor.

XX

KW Neuropeptide FF receptor; NPFF2 receptor; human; antiinflammatory;
 KW antiasthmatic; antidiabetic; immunostimulant; immunosuppressive;
 KW nootropic; neuroprotective; analgesic; anorectic; antipsychotic;
 KW antiaddictive; antimigraine; hypertensive; hypotensive; cardiant;
 KW antiasthmatic; therapy; G protein coupled receptor.

XX

OS Homo sapiens.

XX

Key	Location/Qualifiers
FT Domain	44..71
FT	/note= "transmembrane domain I"
FT Domain	80..104
FT	/note= "transmembrane domain II"
FT Domain	123..141
FT	/note= "transmembrane domain III"
FT Domain	160..180
FT	/note= "transmembrane domain IV"
FT Domain	220..243
FT	/note= "transmembrane domain V"
FT Domain	272..297
FT	/note= "transmembrane domain VI"
FT Domain	315..340
FT	/note= "transmembrane domain VII"
FT Modified-site	8
FT	/note= "N-glycosylated"
FT Modified-site	20
FT	/note= "N-glycosylated"
FT Modified-site	31
FT	/note= "N-glycosylated"
FT Modified-site	198
FT	/note= "N-glycosylated"
FT Modified-site	156
FT	/note= "O-phosphorylated"
FT Modified-site	254
FT	/note= "O-phosphorylated"
FT Modified-site	266
FT	/note= "O-phosphorylated"

XX

PN WO200018438-A1.

Db	121	sglvqgisvaasvftlvaiaavdrfcqvvpfkkpkltiktatfviimiiwvllaitimspav	180
Qy	181	MLHVQEKEKYRVRLSNQNKTSPPVYWCREDWPNQEMRKIYTTVLFIANIYLAPLSLIVIMYG	240
Db	181	mlhvqeekyyrvrlnsqnktsppvywcredwpnqemrkiyttvlfaniylaplslivimyg	240
Qy	241	RIGISLFRAAVPHTGRKNQEQQHWVSRKKQKIIKMLLIVALLFILSWLPLWTLMMLSDYA	300
Db	241	rigislfraavphtgrknqeqhwvserkkqkiikmllivallfilswlplwtlmmisdy	300
Qy	301	DLSPNELQIINIYIYPFAHWLAFGNSSVNPPIYGGFFNENFRRGFQEAQQLCQKRAKPM	360
Db	301	dlspsnelqiiniyiypfahwlafignssvnpaiyggffnenfrrgfqaqlqlcqkrakpm	360
Qy	361	EAYALKAKSHVLINTSNQLVQESTFQNPQHGETLLYRKSAEKPPQELVMEELKETTNSSEI	420
Db	361	eayalkakshvlintsnqlvestfqnpqhgetllyrksaekppqgelvmeelkettnssei	420

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2208	100.0	420	4	Q9NR49	Q9nr49 homo sapien
2	2204	99.8	522	4	Q9Y5X5	Q9y5x5 homo sapien
3	1730.5	78.4	417	11	Q9EQD2	Q9eqd2 rattus norv
4	1060	48.0	430	4	Q9GZQ6	Q9gzq6 homo sapien
5	1024	46.4	432	11	Q9EP86	Q9ep86 rattus norv
6	522.5	23.7	444	6	Q9TUP7	Q9tup7 canis famil
7	499.5	22.6	425	4	Q9HBV6	Q9hbv6 homo sapien
8	492.5	22.3	423	4	Q9NYM4	Q9nym4 homo sapien
9	492.5	22.3	424	4	Q9PLY8	Q9ply8 homo sapien
10	485	22.0	600	5	Q9VW75	Q9vw75 drosophila
11	479	21.7	422	6	Q9TTQ9	Q9ttq9 canis famil
12	479	21.7	452	5	Q9VB87	Q9vb87 drosophila
13	470.5	21.3	429	5	P92045	P92045 lymnaea sta
14	463.5	21.0	385	13	Q9DDN6	Q9ddn6 gallus gall
15	460.5	20.9	381	11	Q9ERC0	Q9erc0 rattus norv
16	460	20.8	381	6	Q9GK74	Q9gk74 macaca mula
17	459	20.8	381	4	Q9UE67	Q9ue67 homo sapien
18	457	20.7	384	6	Q9TSI1	Q9tsi1 sus scrofa
19	455.5	20.6	540	5	Q9VRM0	Q9vrm0 drosophila
20	451.5	20.4	375	13	O57463	O57463 brachydanio
21	451.5	20.4	397	5	Q9NHA4	Q9nha4 boophilus m
22	444.5	20.1	383	6	Q9GK75	Q9gk75 macaca mula
23	442.5	20.0	463	11	Q9EPJ7	Q9epj7 mus musculu
24	440	19.9	374	13	Q9YHX1	Q9yhx1 gadus morhu
25	438.5	19.9	465	5	O44426	O44426 lymnaea sta
26	433.5	19.6	377	13	O73733	O73733 brachydanio
27	427.5	19.4	370	4	O75194	O75194 homo sapien
28	427.5	19.4	440	5	Q9N324	Q9n324 caenorhabdi
29	421.5	19.1	678	5	Q94736	Q94736 stomoxys ca
30	419.5	19.0	373	13	O73734	O73734 brachydanio
31	418	18.9	452	11	Q9JKN0	Q9jkn0 mus musculu
32	417	18.9	394	5	Q9U721	Q9u721 drosophila
33	414	18.8	521	5	Q9VAD2	Q9vad2 drosophila
34	412	18.7	398	4	Q9UDE7	Q9ude7 homo sapien
35	408.5	18.5	411	13	Q9W6I3	Q9w6i3 gallus gall
36	404	18.3	398	4	Q9UDE6	Q9ude6 homo sapien
37	403.5	18.3	375	6	O97505	O97505 sus scrofa
38	401	18.2	504	5	Q9VGX8	Q9vgx8 drosophila
39	396.5	18.0	380	5	Q9NFV2	Q9nfv2 lymnaea sta
40	394.5	17.9	380	5	Q9NFV0	Q9nfv0 lymnaea sta
41	390.5	17.7	380	5	Q9NFV1	Q9nfv1 lymnaea sta
42	388.5	17.6	475	5	Q9VNM1	Q9vnm1 drosophila
43	388	17.6	457	5	Q18534	Q18534 caenorhabdi
44	386	17.5	380	5	Q9NFV3	Q9nfv3 lymnaea sta
45	385.5	17.5	372	11	Q9Z2D4	Q9z2d4 cavia porce

ALIGNMENTS

RESULT 1

Q9NR49

ID Q9NR49 PRELIMINARY; PRT; 420 AA.

AC Q9NR49;

DT 01-OCT-2000 (TrEMBLrel. 15, Created)

DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)

DT 01-MAR-2001 (TrEMBLrel. 16, Last annotation update)

DE G-PROTEIN COUPLED RECEPTOR HLWAR77.

OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

```

Query Match      100.0%; Score 2208; DB 4; Length 420;
Best Local Similarity 100.0%; Pred. No. 2.1e-161;
Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      1 MNEKWDTNSSSENWHPIWNVNDTKHHLYSDINITYVNYLHQPVAAIFIISYFLIFFLCM 60
      |||
Db      1 MNEKWDTNSSSENWHPIWNVNDTKHHLYSDINITYVNYLHQPVAAIFIISYFLIFFLCM 60

Qy     61 MGNTVVCFIVMRNKMHTVTNLFILNLAISDLLVGIFCMPITLLDNIAGWPFNTMCKI 120
      |||
Db     61 MGNTVVCFIVMRNKMHTVTNLFILNLAISDLLVGIFCMPITLLDNIAGWPFNTMCKI 120

Qy    121 SGLVQGISVAASVFTLVAIAVDRFQCVVYPFKPKLTIKTAFVIMI IWVLAITIMSPSAV 180
      |||
Db    121 SGLVQGISVAASVFTLVAIAVDRFQCVVYPFKPKLTIKTAFVIMI IWVLAITIMSPSAV 180

Qy    181 MLHVQEEKYYRVLNSQNKTSVPVYWCREDWPNQEMRKIYTTVLFANIYLAPLSLIVIMYG 240
      |||
Db    181 MLHVQEEKYYRVLNSQNKTSVPVYWCREDWPNQEMRKIYTTVLFANIYLAPLSLIVIMYG 240

Qy    241 RIGISLFRAAVPHTGRKNQE QWHVVSRRKKQKIIKMLLIVALLFILSWLPLWTLMMLSDYA 300
      |||
Db    241 RIGISLFRAAVPHTGRKNQE QWHVVSRRKKQKIIKMLLIVALLFILSWLPLWTLMMLSDYA 300

Qy    301 DLSPNELQIINIYIYPFAHWLAFGNSSVNPIIYGFFNENFRRGFQEA FQLQLCQKRAKPM 360
      |||
Db    301 DLSPNELQIINIYIYPFAHWLAFGNSSVNPIIYGFFNENFRRGFQEA FQLQLCQKRAKPM 360

Qy    361 EAYALKAKSHVLINTSNQLVQESTFQNPBGHTLLYRKSAEKPQQELVMEELKETTNSSEI 420
      |||
Db    361 EAYALKAKSHVLINTSNQLVQESTFQNPBGHTLLYRKSAEKPQQELVMEELKETTNSSEI 420

```

SEQ ID NO: 44

SUMMARIES

Result No.	Score	Query				Description
		Match	Length	DB	ID	
1	2213	100.0	417	21	AA79377	Rat neuropeptide F
2	1884.5	85.2	405	21	AA76883	Mouse NPY-Y7 recep
3	1730.5	78.2	420	20	AAW81358	Human 7-transmembr
4	1730.5	78.2	420	21	AA99930	HLWAR77 polypeptid
5	1730.5	78.2	420	21	AA79375	Human neuropeptide
6	1728.5	78.1	420	21	AB07426	Amino acid sequenc
7	1689.5	76.3	408	21	AA76882	Human NPY-Y7 recep
8	1365.5	61.7	336	20	AAW67774	Partial human 7-tr
9	1365.5	61.7	336	21	AA99931	HLWAR77 polypeptid
10	1030	46.5	428	21	AA56887	Human B5 receptor

11	1026	46.4	430	21	AAAY93151	Novel human G-prot
12	1026	46.4	430	21	AAAY79376	Human neuropeptide
13	1001	45.2	432	21	AAAY93146	Novel rat G-protei
14	1001	45.2	432	21	AAAY79373	Rat neuropeptide F
15	959	43.3	432	21	AAAY56886	Rat B5 receptor po
16	523	23.6	444	20	AAAY03649	Human 7-transmembr
17	523	23.6	444	22	AAB61969	Human HCRTR2 polyp
18	522	23.6	460	22	AAB61970	Rat HCRTR2 polypep
19	521	23.5	444	22	AAB61968	Canine wild-type H
20	508	23.0	431	21	AAAY94993	Human secreted pro
21	508	23.0	431	22	AAB74773	Human G protein-co
22	508	23.0	431	22	AAB48963	Human G protein-co
23	506	22.9	431	21	AAAY71309	Human orphan G pro
24	506	22.9	431	21	AAB02843	Human G protein co
25	501	22.6	402	17	AAW06124	Neuropeptide recep
26	500	22.6	431	21	AAB02853	Human G protein co
27	499	22.5	425	19	AAW80456	G-protein coupled
28	499	22.5	425	22	AAB67489	Amino acid sequenc
29	499	22.5	425	22	AAB67079	Human HFGAN72 rece
30	498	22.5	381	19	AAW41710	Rhesus monkey neur
31	498	22.5	381	21	AAAY56888	Human Y2 receptor
32	493.5	22.3	381	16	AAR78273	Rat hippocampal ne
33	493	22.3	381	16	AAR78271	Human hippocampal
34	492.5	22.3	381	16	AAR78272	Rat hippocampal ne
35	484	21.9	423	19	AAW81460	Human G-protein co
36	483	21.8	423	18	AAW34512	G protein coupled
37	482	21.8	423	18	AAW32797	Human derived long
38	472	21.3	377	17	AAW06126	Neuropeptide recep
39	472	21.3	389	19	AAW80805	Amino acid sequenc
40	469.5	21.2	369	17	AAW06125	Neuropeptide recep
41	464.5	21.0	428	18	AAW29104	Enhanced CCK-A/gas
42	453.5	20.5	428	18	AAW29102	Human peptide horm
43	453.5	20.5	428	22	AAB66630	Human CCK A recept
44	448.5	20.3	430	14	AAR40772	Sequence encoded b
45	448.5	20.3	430	22	AAB66625	Guinea pig CCKA re

ALIGNMENTS

RESULT 1

AAAY79377

ID AAAY79377 standard; Protein; 417 AA.

XX

AC AAAY79377;

XX

DT 01-AUG-2000 (first entry)

XX

DE Rat neuropeptide FF (NPFF2) receptor.

XX

KW Neuropeptide FF receptor; NPFF2 receptor; rat; antiinflammatory;

KW antiasthmatic; antidiabetic; immunostimulant; immunosuppressive;

KW nootropic; neuroprotective; analgesic; anorectic; antipsychotic;

KW antiaddictive; antimigraine; hypertensive; hypotensive; cardiant;

KW antiasthmatic; therapy; G protein coupled receptor.

XX

OS Rattus norvegicus.

XX

FH Key Location/Qualifiers

FT Domain 44..71

FT /note= "transmembrane domain I"

FT Domain 81..104

FT /note= "transmembrane domain II"

FT Domain 123..141

FT /note= "transmembrane domain III"

FT Domain 161..180

FT /note= "transmembrane domain IV"

FT Domain 220..243

FT /note= "transmembrane domain V"

FT Domain 271..296

FT /note= "transmembrane domain VI"

FT Domain 314..339
 FT /note= "transmembrane domain VII"
 FT Modified-site 10
 FT /note= "N-glycosylated"
 FT Modified-site 18
 FT /note= "N-glycosylated"
 FT Modified-site 113
 FT /note= "N-glycosylated"
 FT Modified-site 195
 FT /note= "N-glycosylated"
 FT Modified-site 154
 FT /note= "O-phosphorylated"
 FT Modified-site 263
 FT /note= "O-phosphorylated"
 FT Modified-site 264
 FT /note= "O-phosphorylated"
 XX
 PN WO200018438-A1.
 XX
 PD 06-APR-2000.
 XX
 PF 24-SEP-1999; 99WO-US22384.
 XX
 PR 25-SEP-1998; 98US-0161113.
 PR 22-FEB-1999; 99US-0255368.
 XX
 PA (SYNA-) SYNAPTIC PHARM CORP.
 XX
 PI Gerald CPG, Jones KA, Bonini JA, Borowsky B;
 XX
 DR WPI; 2000-293017/25.
 DR N-PSDB; AAZ94669.
 XX
 PT Nucleic acid encoding a mammalian neuropeptide FF (NPFF) receptor,
 PT useful for treatment of e.g pain, obesity, diabetes, hypertension,
 PT hypotension, hypoglycemia, respiratory disorders -
 XX
 PS Claim 21; Fig 23A-B; 253pp; English.
 XX
 CC The present sequence is that of rat neuropeptide FF (NPFF2)
 CC receptor, as deduced from a cDNA clone (see AAZ94669) isolated
 CC from rat spinal cord cDNA. High levels of rat NPFF2 mRNA are
 CC found in the central nervous system. Expression patterns suggest
 CC roles for NPFF2 in neuroendocrine regulation, and in regulation of
 CC circadian rhythm, regulation of appetite and other functions
 CC modulated by the hypothalamus. A possible role in regulation of
 CC cardiovascular function is also suggested. High levels in the
 CC amygdala suggest a role in modulation of mood, fear, phobia and
 CC anxiety, and NPFF2 may be a target for treatment of depression and
 CC other neuropsychiatric disorders. The invention provides rat
 CC and human NPFF polypeptides and polynucleotides, vectors, host
 CC cells, antibodies, nucleic acid probes, antisense oligonucleotides,
 CC transgenic animals, methods of isolating mammalian NPFF receptors,
 CC methods of treating an abnormality associated with NPFF receptor
 CC activity, methods of determining binding of compounds to NPFF
 CC receptors, methods of identifying agonists and antagonists of NPFF
 CC receptors, and the agonists and antagonists obtained. Claimed
 CC methods of treating an abnormality that is alleviated by
 CC increasing/decreasing NPFF activity involve administering an NPFF
 CC receptor agonist/antagonist. The abnormality is a lower urinary
 CC tract disorder, an epinephrine release disorder, a gastrointestinal
 CC disorder, irritable bowel syndrome, a cardiovascular disorder, an
 CC electrolyte balance disorder, diuresis, hypertension, hypotension,
 CC diabetes, hypoglycemia, a respiratory disorder, asthma, a
 CC reproductive function disorder, an immune disorder, an endocrine
 CC disorder, a musculoskeletal disorder, a neuroendocrine disorder, a
 CC cognitive disorder, a memory disorder, a sensory modulation and
 CC transmission disorder, a motor coordination disorder, a sensory
 CC integration disorder, obesity, pain, psychotic behaviour,
 CC morphine tolerance, nicotine addiction, opiate addiction,
 CC affective disorder or migraine (all claimed).

XX
SQ Sequence 417 AA;

Query Match 100.0%; Score 2213; DB 21; Length 417;
Best Local Similarity 100.0%; Pred. No. 6e-241;
Matches 417; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy 1 MGKRWDSNSSGSDHIWSGNDTQHPWYSIDINITYMNYLHQPHVTAVFISSYFLIFFLCM 60
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Db 1 mgkrwdsnssgswdhiwsgndtqhpwysidinitymnylhqphvtavfissyfliff lcm 60

Qy 61 VGNTVVCVFFVIRNRYMHTVTNFFIFNLAISDLLVGIFCMPITLLDNIAGWPFSSMCKI 120
    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 61 vgn tvvcfvv irnrymhtvt nffifnlaisdllvgifcmpitlldniagwpfgssmcki 120

Qy 121 SGLVQGISVAASVFTLVIAIVDRFRCVVPFKPKLTVKTA FVMIVIIWGLAITIMTPSAI 180
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Db 121 sglvqgisvaasvftlvaiavdrfrcvvpf kpkltvktafvmiviiwglaitimtpsai 180

Qy 181 MLHVQEEKYYRVLSSHNTSTVYWCREDPNQEMRRIYTTVLFATIYLA PLSLIVIMYA 240
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Db 181 mlhvqeekyyrvlsshntstvywcredwpnqemrriy ttvlfatiylaplslivimya 240

Qy 241 RIGASLFKTSAHSTGKQRLQWHVSKKKQKVIKMLLTVALLFILSWLPLWTLMMLSDYAD 300
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Db 241 rigaslfktsahstgkqrleqwhvskkkqkvikml ltvallfilswlplwtlmm lsdya d 300

Qy 301 LSPNKL RVINIYVYPFAHWLAF CNSSVNPIIYGFFNENFRSGFQDAFQFCQKKVKPQEAY 360
    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 301 lspnklrviniyvypfahwla fcnssvnpiiygffnenfrsgfqdafqfcqkkvk p qeay 360

Qy 361 GLRAKRNLDINTSGLLVHEPASQNP SGENLGCRKSADNPTQESLMEETGEATNSTET 417
    ||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 361 glr akrnldintsgllvh epasqnp sgenlgcrksadnptqeslmeetgeatnstet 417
```

SUMMARIES

Result No.	Query		Length	DB	ID	Description
	Score	Match				
1	498	22.5	381	2	I39187	neuropeptide Y/pep
2	484.5	21.9	449	2	A41738	neuropeptide Y rec
3	477.5	21.6	423	2	B40470	glucocorticoid-ind
4	457.5	20.7	443	2	D40470	glucocorticoid-ind
5	453.5	20.5	428	2	JN0692	cholecystokinin ty
6	448.5	20.3	430	2	I51898	cholecystokinin A
7	448	20.2	444	2	A42685	cholecystokinin re
8	442.5	20.0	436	2	JC5599	cholecystokinin-A
9	439	19.8	427	2	S50150	gastric CCK-A rece
10	438.5	19.8	366	2	S71152	neuropeptide Y/pep
11	438.5	19.8	491	2	C40470	glucocorticoid-ind
12	434.5	19.6	384	2	A45490	neuropeptide Y/pep
13	427	19.3	370	1	I52315	G protein-coupled
14	422	19.1	349	2	S12863	G protein-coupled
15	422	19.1	382	2	B46133	neuropeptide Y/pep
16	421.5	19.0	519	2	S17783	tachykinin recepto
17	421	19.0	382	2	S27388	neuropeptide Y rec
18	409	18.5	384	2	S20303	neurokinin 2 recep
19	408.5	18.5	457	2	T29741	hypothetical prote
20	407	18.4	385	2	S55524	neurokinin 3 recep
21	405.5	18.3	394	2	JC7209	galanin receptor -
22	405	18.3	452	2	A34916	neurokinin 3 recep
23	402	18.2	390	2	A36737	neurokinin 2 recep
24	399.5	18.1	398	1	JQ1059	neurokinin 2 recep
25	395.5	17.9	391	2	T32517	hypothetical prote
26	394	17.8	450	2	A55886	dopamine receptor
27	394	17.8	455	2	T15622	hypothetical prot